Neurisothrips saki. Photo: S. Chun.

Terrestrial Invertebrates

Thrips
Order Thysanoptera

ORDER INCLUDES:
2 Native Families
~7 Native Genera
3 Endemic Genera
~26 Native Species
~21 Endemic Species

GENERAL INFORMATION: Thrips are herbivorous, fungivorous, or predaceous, preying on insects and mites. Most species in Hawai‘i are herbivores, feeding on the tissues of living plants, however, understanding true reproductive host plants of species is very difficult. Some species are parthenogenic, capable of producing young without mating. Metamorphosis is intermediate and thrips rarely exceed four millimeters (0.2 inches). Some thrips are gregarious and found in large colonies. This order is poorly known and understudied in Hawai‘i. The genus *Neurisothrips*, with 14 species, is the only endemic thrips genus in Hawai‘i that has significantly radiated. Seven other genera in the family Phlaeothripidae have between one and five species considered to be native, but their true status is unclear and they may be introduced species that are unrecognized in their native range.

DISTRIBUTION: Thrips are recorded from all the MHI except for Ni‘ihau and Kaho‘olawe.

ABUNDANCE: Unknown. A lack of systematic surveys prevents any population estimate. However, the loss of native habitats likely means that species within the order are declining. Several native species have not been collected since their original description decades ago.

LOCATION AND CONDITION OF KEY HABITAT: Thrips occur in a variety of habitats ranging from dry, lowland areas to wet, high-elevation forests. Fungivores are more likely to occur in wetter habitats. Individuals are often found in flowers, on branches, on leaves, under bark, in leaf litter, and in other well-protected locations.

THREATS:
- Loss or degradation of habitat.
- Loss of host-specific plants.
- Predation or parasitism.
- Insufficient information for species assessments.

CONSERVATION ACTIONS: The goals of conservation actions are not only to protect current populations and key breeding habitats but also to establish additional populations, thereby reducing the risk of extinction. In addition to common statewide and island conservation actions, specific management directed toward thrips should include:
- Conduct surveys to determine the distribution and abundance of known thrips and to document and identify new species.

- Control of invasive predators, such as ants.
- Preserve, maintain, and restore habitats supporting existing populations.

MONITORING:

- Continue monitoring the status of known populations.

RESEARCH PRIORITIES:

- Conduct studies to document the biology, habitat requirements, and life history of native species.
- Conduct systematic and taxonomic assessments of poor known and understudied taxa; review and revise taxa in need of scrutiny.
- Initiate efforts to locate and identify new species.
- Initiate studies to determine the effects of natural enemies on native species.
- Conduct and support systematic and taxonomic assessments of poorly known and understudied taxa. Review and revise genera in need of taxonomic scrutiny; work to identify and describe new species to science.

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